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B2

2. Description of the Related Art--

B3

Page 3, between lines 14 and 15, insert the heading --Summary of the Invention--;

between lines 20 and 21, insert the following:

--Brief Description of the Drawing

Figure 1. A model of the biological consequences of antirecombination during meiosis

A. Homologous chromosomes recombine and undergo crossing over. The homologues become physically connected by a chiasmata and consequently orientate correctly on the meiosis I spindle. Correct disjunction in the first division is followed by an equational division to produce four euploid spores. Spores b. and c. contain recombinant chromosomes.

B. The mismatch repair proteins will prevent a crossover between homologous chromosomes. Apposition of the centromeres is not ensured and the resultant univalents segregate randomly with respect to each other at meiosis I. If both univalents attach at the same spindle nondisjunction will result. After meiosis, two disomic and two nullisomic spores will be produced. None of the chromosomes will be recombinant. The nullisomic cells lack essential genetic information and will be dead. The disomic cells contain unbalanced genomes and may have reduced fitness.

Description of the Preferred Embodiment--

B5

Page 4, line 24, after "processes." insert the sentence --However, this report and the experiments described therein should not be construed to limit the spirit and scope of the claims.--

Page 5, line 11, delete "are".

Page 10, line 1, delete in its entirety.